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A PRACTITIONER'S STUDY.

Last week we published an article upon ovine abomasitis due to the *Strongylus cervicornis*, by Mr. E. G. Haskell, which deserves careful reading. It is of interest viewed merely as a contribution to the study of the still imperfectly understood life-history of the parasite in question and of the disease it causes; for it will be seen that the author's observations differ in some respects from the classic account given by M'Fadyean, the original discoverer of the strongyle. Mr. Haskell, for instance, reports finding "numerous free forms which appeared to be embryos" in the stomach contents; M'Fadyean found "neither free embryos nor larger sexually immature worms," but only ova and adult forms. Again, in his account of the symptoms and post-mortem findings of the disease, Mr. Haskell does not mention one feature noted by M'Fadyean and others, viz., the ingestion of sand or earth.

As regards treatment, also, Mr. Haskell differs from some observers in attaching a distinct value to certain drugs—some men doubt the utility of any medication in parasitic abomasitis. And, further, apart from all details of the article, there is one general feature which gives it value—its internal evidence of independent study and observation, which did not stop at the diagnosis.

Diagnosis alone satisfies most men. A few go further, and seek to compare what they see with the results recorded by others, and any one doing so, while he cannot fail to improve his own conception of the subject he works upon, may succeed in advancing the knowledge of the profession. It is not easy for the practitioner to attempt work of this nature—work always bordering upon, and apt at any time to develope into, actual research—but the difficulty varies a great deal in accordance with the subject attempted.

Many subjects are quite impossible to the ordinary working practitioner. But with others, the difficulties are not insurmountable, and parasitology is certainly one of those most accessible to the man in practice. It demands no such costly elaboration of apparatus as is required for a study like bacteriology; for the bulk of parasitological work, indeed, an ordinary microscope and very simple accessory apparatus will amply suffice.

The technique, for the most part, presents no great difficulty; while in town and country alike—especially in the latter—there is always an abundance of material for study. Parasitology is one of the numerous subjects for practical study which literally lie ready to the hand of almost every clinician; and the wonder is that comparatively so few men have taken it up. A decade or two ago, our members generally felt little interest in it: the increasing interest during recent years is a healthy sign.

TWO CASES OF FRACTURE OF THE FIRST RIB.

I.—A five-year-old mare, belonging to the Army Service Corps, was admitted to hospital on 23rd November, 1911, lame on the off fore leg, the toe only touching the ground, and no weight was put on the leg. An examination of the limb revealed nothing abnormal, except pain on pressure in the region of the shoulder—pain which did not seem to be due to anything existing in the limb itself.

When made to move the mare could bring the limb forward, but when any weight was put on it she sank down until the sternum almost touched the ground, with the leg pushed out in front, remaining in that position for a few seconds until she recovered herself on the other leg. About a fortnight later she was taken out of slings for further examination and showed the same symptoms. A fracture of the first rib was thought to exist, and the mare was destroyed on 15th December.

Post-mortem,—Fracture of the first rib on off side, about two inches from the vertebræ.

History.—The injury occurred when the mare was being driven in double harness in an ambulance waggon. The waggon was being turned round in a narrow road, and while in process of turning the mare seemed to stumble, according to the driver, and immediately afterwards was on three legs. As she was unable to walk, a horse ambulance was sent for, and the animal brought to the Station Veterinary Hospital.

I enclose some photographs of this case, which Capt. W. H. Nicol, A.V.C., kindly took for me.

II.—The other case was a troop horse of 5th Dragoon Guards. A six year old mare which had been running out at grass for two months prior to 12th December, 1911, the date she was admitted to hospital. She arrived late at night in a horse ambulance, in which she had got down *en route*, and was lying on the injured side—near side. She had to be carried from the ambulance into a loose-box, where she was laid on her off side, and made as comfortable as possible. The following morning it was thought best to destroy the mare as she was in great pain.

Post-mortem.—About two inches of lower end of first rib, on near side, showed signs of a chronic ostitis. The portion of the rib which articulates with the sternum was involved in the ostitis, two-thirds of the articular cartilage being absent, and a roughened bony surface remaining. Just above the portion of the rib which showed old standing inflammatory changes, viz., in the apparently healthy part of the bone, the rib was transversely fractured.

History.—It is not known how the injury occurred while at grass. For months previous to going out to grass this mare is said to have shown signs of pain when being "girthed up" in the Troop stables, and on several occasions fell down in the stall when this was being done. She is also said to have fallen down on more than one occasion when first mounted, but showed no sign of being unable to carry the man's weight, when actually at work.

The inflammatory changes referred to in the sternal extremity of the rib were of old standing, but the fracture was recent.

W. A. McDougall, Maj. A.V.C.
Station Veterinary Hospital, Curragh.
24th January, 1912.

ABSTRACTS.

A Cultural Method of Hyper-Immunising Animals for the Production of Anti-Rinderpest Serum.

The manufacture of rinderpest anti-serum has hitherto been very expensive on account of the great wastage of control animals for the production of virulent blood for use as the hyper-immunising agent. Many attempts have been made to increase this material without increasing the expenditure of animals, one of which, viz., the use of "peritoneal washings," was recently mentioned in these columns in a note upon a paper by Major F. S. H. Baldrey. This method has led the same investigator to a further series of experiments, which he now describes in detail (*Journal of Tropical Veterinary Science*, Vol. VI., Part III.), and which have resulted in the discovery of a new method. Major Baldrey's conclusions are as follows:—

1. Anti-rinderpest serum can be prepared by the inoculation of virulent blood diluted with broth.
2. It appears possible that an active toxin is produced and excreted into the broth by the rinderpest organisms contained in the virulent blood, and by this means the results recorded are obtained.
3. This material or probable toxin is rapidly excreted, and so active that it appears to quickly inhibit any further growth of the rinderpest organism, destroying its virulence, and finally killing it.
4. The substance so obtained is very much more active than that obtained in virulent blood, so much so that it cannot be given subcutaneously with safety on account of the extreme inflammatory condition it sets up.
5. To use it as a hyper-immunising agent, doses are better given intravenously and gradually increased so that the "salting" is spread over a period of some two months or more.
6. The immune serum so obtained is powerful, but 15-20 per cent. weaker than that made by massive injections of virulent blood.
7. The method is an eminently practical one, and shows a great financial saving.

Regarding the last point, it may be added that,

should the method stand the test of extended use in the field, the financial saving it will effect will be enormous. It is estimated that, instead of the Muktesar Laboratory using some 200 to 250 control animals per month, 15 or 16 will suffice. This will represent a direct financial saving of 1,600 to 1,700 rupees per month, besides greatly increasing the available accommodation.

Pharyngeal Papillomata in a Dog.

Tumours of the pharynx are rare in the small domestic animals. In cattle, numerous authors have recorded cases of tumours properly so-called, as papillomata, sarcomata, carcinomata, lipomata, and cysts, and also of infectious new growths such as those of actinomycosis and tuberculosis. But in the dog only a single case, reported in Cadéac's Encyclopedia, exists in veterinary literature. Hebrant and Antoine, of the Belgian Veterinary School, now record the following on account of its exceptional rarity.

The subject was a large dog, ten years old, which for some time had shown loss of appetite. The owner said that the general condition had always been excellent, but seemed to have become bad during the last few days, while the dog showed great difficulty in swallowing food.

Careful examination of the patient revealed nothing very marked. The temperature was normal, the pulse and respirations were calm, the functions of the abdominal viscera appeared satisfactory, and all the vital functions were executed perfectly. Despite this the animal was emaciated. There was no enlargement of the heart, and the urine contained neither albumen nor cylinders, thus enabling nephritis, which is common amongst old dogs, to be eliminated from the diagnosis.

The authors suspected a simple angina, and minutely examined the pharyngeal region. External inspection and palpation revealed nothing, and the interior of the pharynx was then examined by applying a mouth-gag and drawing out the tongue. The pharyngeal mucous membrane was absolutely normal; but it was seen that two tumours, fairly well detached, papillomatous in aspect, one attaining the size of a nut and the other that of a large pea, were situated upon the right lateral wall of the passage.

The authors immediately attempted to remove these growths by means of forceps and curved scissors, but found it impossible to reach them. They therefore postponed the operation till the next day, and in the meantime procured the instrument known in human surgery as the *amygdolotome*. This consists of two annular knives gliding one upon the other with a small fork gliding above them, the latter piercing the tumour to be removed and assisting to adjust it in position for the knives to divide it at its base.

By means of this instrument the mouth being kept open and the tongue well drawn out, the two tumours were removed in an instant. A rather abundant hæmorrhage appeared at this moment, and at the same time the animal fell into syncopy. Artificial respiration, inhalations of ether, and tamponnage with chloroform water soon rectified these accidents. After treatment consisted in painting the operative wounds with diluted tincture of iodine, the animal being kept meanwhile upon a milk diet. Four days after the operation, as all was going well, the dog was taken home again by his owner. —(*Annales de Méd. Vét.*)

[The authors do not definitely say that a microscopic examination of these tumours was made. They head their article as one on "Pharyngeal papillomata in a dog," and as the case was a very rare one, and occurred in a veterinary school, it is hardly likely that the diagnosis was not verified by the microscope.—*Transl.*]

Suppurative Orchitis and Epididymitis in a Horse.

Lecomte records (*Revue Vétérinaire*) a case of a horse which presented a voluminous engorgement of the scrotal region. When first seen, this swelling was merely œdematous, without heat or appreciable pain. An astringent treatment was prescribed.

Two days later, the symptoms were considerably aggravated. The animal was in an intense fever; and the œdema had become localised to the left testicular region, which was warm and very painful. Movement was difficult, and the limbs were maintained in abduction. Fœtid pus was escaping from the urinary meatus.

Not finding the fluctuation which is usually met in vaginalitis, the author diagnosed suppurative orchitis, and decided to remove the diseased testicle.

The operation was performed by torsion, after previously washing out the vas deferens and the urethra, which caused the evacuation of pus by the urinary meatus. Recovery was complete in eleven days.

A section of the testicle showed the existence of three abscesses, of the size of a nut, in communication with the seminiferous ducts. This indicated an ascending infection.—(*Annales de Méd. Vét.*)

Injury to Rumen by a Fractured Rib.

Enrico Sampoli records (*Il Nuovo Ercolani*) a case of an ox which fell upon declivitous ground with the head under the body, in such a way that the point of the left horn pressed into the left costal region without, however, leaving a visible external wound. The ox was extricated from this position with much difficulty, and immediately brought into a stall, where he showed no disturbance in general health.

Soon afterwards, however, an extensive emphysema of the skin developed on the left side of the body. At the highest point of this, about the eleventh intercostal space, a cone-shaped depression existed, running obliquely backwards to the twelfth rib. Here the skin was hairless and thinned.

In a few days the emphysema subsided; but at the region mentioned above a firm swelling remained, which grew progressively as time went on, and increased in size till it reached the dimensions of a man's head. At its upper edge, at the place

upon which the horn must have borne, the skin and underlying tissues now became necrotic; so that Sampoli could easily force in his finger and reach a spacious cavity filled with alimentary material and shreds of tissue. In the depth of this the upper part of the twelfth rib, which had been completely fractured in its middle third, could be felt detached from all the muscles. The lower portion of the bone had been displaced inwardly.

Soon afterwards the ox was slaughtered, and post-mortem examination showed that the lower portion of the rib had made a rent of about 2½ inches long in the rumen. An adhesive circumscribed peritonitis had afterwards, by the formation of a thick ring of connective tissue, led to union of the edges of this rent with the peritoneum, and so prevented the entrance of masses of food into the peritoneal cavity. This explained the comparatively slight effect of the injury upon the general condition of the animal, which ate normally and ruminated regularly until slaughtered.—*Berliner Tier. Woch.*

Polymyositis Metastatica.

Emil Balla, of Budapest, records (*Allatorvosi Lapok*) the case of a lean St. Bernard dog which, after copulation, showed symptoms of paralysis. He could still, with assistance, raise himself upon his hind limbs, but he straddled the fore limbs and fell after a few steps. Both forearms showed spindle-shaped swellings, were very painful, and in some places were of a stony hardness.

Three days later, a similar painful swelling appeared in the adductors of the left hind limb, and then another in the posterior pelvic muscles. The dog died on the fourth day of observation.

Post-mortem, purulent inflammation of the intermuscular connective tissue of the muscles of the fore-quarters, the lumbar and pelvic muscles, and the vasti muscles, was found. An abscess was also present in the prostrate, and small metastatic centres in the kidneys.

From the condition of the lesions Balla considers that the primary abscess was that situated in the prostate, and that the others were metastates from it. Similar cases are not rare in the human subject, but have not hitherto been described in animals. —*Berliner Tier. Woch.*

Five Cases of Tricuspid Stenosis in the Ox.

Jöhnk, of Berne, records (*Münch. Tierarztliche Wochenschrift*) five cases of cows affected with tricuspid stenosis. In each case the diagnosis was based upon venous obstruction, and an especially remarkable feature of the series was that icterus of the conjunctiva was a constant symptom in all. One case recovered, the others were slaughtered. Each of the four cases slaughtered, upon post-mortem examination, showed fibrinous new growths, which had become partially organised, upon the tricuspid values. A further noteworthy feature of the post-mortem examinations was that each case showed lesions of the liver—nutmeg liver, distomatosis, or chronic interstitial inflammation. From this fact, and the constant presence of icterus observed during life, Jöhnk concludes that the endocarditis was the sequel of the hepatic affection.—*Berliner Tier. Woch.*

W. R C.

THE UTILIZATION OF THE ZEBRA AND ITS HYBRIDS.

[A short report by H. Watkins-Pitchford, Government Bacteriologist (Natal)].

This subject has frequently been considered in the past, especially in Natal, but hitherto no adequate or systematic endeavour has been made, under proper conditions, to develop the project or to prove its great potentialities.

The advisability of taking some steps to utilize the great equine asset that we possess in the zebra has frequently been urged upon the late Natal Government. The practically unlimited numbers of zebra available, their ready domestication under proper system, their immunity to disease, and the promise reasonably to be entertained of their hybrids exceeding greatly in value the parent stock, has seemed to render the question in the past one of much economic promise.

Some eight years ago the the late Natal Government decided to undertake preliminary observations on the point, and an adequate sum was placed upon the draft estimates of the writer's department. Financial considerations, however, led to the reluctant withdrawal of the item at the last moment, since which time no official steps have been taken beyond one or two preliminary observations made by myself in Zululand, and much correspondence between the late Natal Colonial Secretary's Department and the Agricultural Department, magistrates, and those interested in the project.

The writer would now respectfully urge upon the consideration of the Government the undertaking of such adequate preliminary observations as will suffice to demonstrate the great use which can be made of the zebra and its hybrids as a transport animal, and one which will not only take the place of the mule but will promise to possess an immunity to indigenous diseases, rendering it available for service in all parts of the Union.

The writer is also confident this possibility can be shown without any great difficulty or expense, and that the outcome of such observations will be of far-reaching interest and profit to South Africa.

Objections to any system of zebra domestication are generally based upon the difficulty of securing a sufficient number of animals or the intractability of the zebra when caught. Both these objections may be lightly dismissed. Attempts to catch the zebra by twos or threes by lassoing or riding them down have nearly always proved unsatisfactory, as the Natal records show, while the attempts to drive into enclosures have been generally unsuccessful by reason of the small number of men engaged in driving, etc. Where, however, bomas or catching-kraals are properly constructed and ample native assistance is secured, no fear need be apprehended as to success in driving.

The intractable nature of the zebra has often been urged against its utility, but the objection does not bear close investigation. (It is, of course, to the Burchell's zebra not the mountain zebra that the present remarks are intended to apply). All the evidence available goes to prove the ease with which recently captured zebra have been rendered amenable generally within a few days of capture (providing this latter has been properly effected).

As regards their reliability to retain their domestication no difficulty exists. Young zebras in Natal have been outspanned and grazed upon the same veld upon which they ran wild shortly before, without any difficulty being experienced in straying, inspanning, etc. In a case reported by a Natal magistrate of a stampede of a troop of wild zebra, together with several recently tamed animals used for decoys, these latter bolted back to their stables while the wild troop went in another direction. Such instances could be multiplied were it necessary to prove that domestication is both easily and permanently effected.

Docility and steadiness in harness with high courage in moving dead weight are claimed for this animal by all possessing an experience of the properly-broken Burchell zebra. The magistracy of Ubombo, Zululand, is situated upon the top of a hill—described by the Public Works authorities of Natal as the steepest grade road in the Province. The magistrate at Ubombo wrote last year (in reply to some query of mine) - "They (the zebra span) came up here again the other day, eight of them, and the majority not nearly full grown, with 3000lb. on the wagon; then, again, they are so wonderfully amenable," etc. Pace and endurance—on ordinary corn food—great hardihood, and total immunity to tsetse and horse-sickness are also among the good qualities of this undeveloped equine. The only thing requisite is size (the average Burchell zebra is about 14 hands), and on this point the writer is confident—given the care and selection in mating observed in horse-mule production—the outcome would as regards size be all that could be reasonably looked for.

The Burchell zebra crosses readily with other equines, a fact which renders possible the production of a hybrid of almost any desired stamp, and there is no reason why zebra mules produced by appropriate mating should not only rival in size but exceed in other qualities the best horse mules now imported into South Africa.

Difficulties of mating, sometimes experienced by breeders in the past, would not exist under the system of artificial insemination, while the rate of reproduction would be able to be profitably regulated by this means.

The ease with which the zebra breeds in captivity would—under adequate management—provide numbers of animals of approved type suitable for stud purposes, and it is anticipated that after one or two successful drives on an adequate scale the occasion for further captures would be infrequent—at least until the scheme developed large dimensions.

Preliminary observations would be directed to establishing the most successful lines of mating both with the horse and the ass—on both male and female side—and to determining exactly the degree of immunity possessed by such hybrids, and whether any lapse of natural immunity occurred in zebra removed from their natural *habitat*.

Such preliminary experiments—though of essential importance to the ultimate successful working of the scheme on scientific lines—could be carried out at a moderate cost.

The writer would suggest—in the event of the project securing the favourable notice of Government—that such preliminary work be undertaken in Natal, this Province—by reason of its climatic conditions—being well suited for the purpose. With slight alterations and unimportant additions of a temporary nature, the buildings and paddocks of the laboratory at Pietermaritzburg would be found well adapted to the purposes of this inquiry, and extensive ground could, it is believed, be secured by the courtesy of the Pietermaritzburg Corporation, should the necessity for any such extensions become at any time apparent as a temporary measure.

The above scheme has been put forward in skeleton and with the intent to draw attention to the existence of a latent South African asset which is believed to be of great magnitude. The writer has already in another place sought to bring the scheme to the notice of the Defence authorities, particularly in connection with the establishment of a first line of transport capable of being employed in operations in districts dangerous for horse-sickness or deadly to ordinary equines from the existence of "fly belts."—*South African Agricultural Journal.*

A NEW VIEW OF THE BACTERIOLOGY OF LEPROSY.

By T. S. B. Williams, Capt. I.M.S.

[Extracts from a lecture delivered at the London School of Tropical Medicine].

The view which I wish to advance is that the lepra parasite is not an acid-fast bacillus belonging to the fission fungi, but that it is a very pleomorphic streptothrix, which, in addition to changes in form, exhibits marked changes in its staining reactions in regard to the quality known as "acid-fastness." This being the main point of my lecture, it will conduce to a clearer exposition of the subject if I may be allowed to refer very briefly to some of the principal features of the Streptotricheæ. I would especially refer those interested in this group of organisms to the Milroy Lectures of 1910 by Mr. Foulerton of the Middlesex Hospital, which give a most interesting and clear account of this group of organisms, based on original researches extending over many years. The following description of the Streptotricheæ is taken from those lectures:

The typical life-history of a streptothrix may be said to consist of:

1. Branching mycelium.
2. Isolated rod segments.
3. Spherical spores.

Development may be studied in one of the quickly growing saprophytic species. One starts with the spore; from this two or three threads sprout and elongate, so that at an early stage of development one has a typical ray fungus consisting of three mycelial threads, usually of unequal length, and radiating out from the position occupied by the central spore. From these primary threads lateral branches in turn sprout out, and soon there is developed a densely tangled mass of mycelium representing the fully developed stage of the organism.

The next stage is transverse segmentation. The branching mycelium, which hitherto has been apparently homogeneous in structure throughout its length, now presents transverse segments produced by an obvious process of degeneration extending across the mycelium.

Following this is a stage of fragmentation. The degenerated portions of mycelium disappear, and a conglomeration of separate rod segments represents the original system of branching mycelium. Generally speaking, these rods are morphologically identical with bacilli, except that here and there a rod with the remains of a lateral branch attached to it may be seen.

With, or soon after, the occurrence of segmentation a special kind of spore formation may be observed. In a typical instance special spore-bearing organs are developed; fine aerial hyphæ, which, erecting themselves from the growth of mycelium, often cause a powdery appearance on the surface. Spores are produced in these aerial hyphæ. It seems probable, also, that under certain conditions these spores may be produced along the length of the mycelium, as well as in the special hyphæ. From these spores fresh filaments grow out.

The bacteria or fission fungi are defined as unicellular organisms, which reproduce themselves by a process of

transverse fission or spore formation. In the one case the parent cell produces two new cells by clean transverse fission; in the other casea single endogenous spore is produced, so that a single cell succeeds a single cell.

In the hyphomycetes, or mould fungi, we have a more complex kind of organism, in whicb sporulation is a function of specialised spore-bearing organs of various types, the simplest, perhaps, of which is represented by the aeral hyphæ of the Strepnotricheæ.

The stage of full development of the streptothrix is represented by a system of branching homogeneous mycelium. . . . . As to the nature of what have been described as the spherical spores, there can be no doubt, and it is probable that the rod segments also have to be considered as being in a sense spore bodies; that is to say, it is probable that these rod segments represent a more resistant form which is capable of producing a new mycelium directly, and by means of which, in case of disease, the infection commonly is transported from one part of the body of the host to another. The fully-developed mycelium obviously, because of its bulk, would not pass easily from one part to another, except by steady invasion along continuous tissues; and there are reasons for believing that, when living as a parasite, under many of the conditions applying in case of disease, a streptothrix does not readily undergo complete sporulation, with the development of spherical spores. But, under parasitic conditions segmentation and fragmentation of the mycelium occur freely; isolated rod segments will be carried from part to part readily enough, and by the examination of sections through recently established secondary foci of infection it has been found possible to obtain evidence microscopically of the early sprouting of branching mycelium directly from rod segments, and not from spherical spores.

The history of the Streptotricheæ is further complicated by the fact that there is strong evidence that, under parasitic conditions of existence, the rod segments may be capable of reproducing themselves directly as rod-segments, and thus simulating true bacilli.

It will be realized, then, how very complicated is the life-history of this group of organisms, and one may be led into many errors unless one keeps these facts constantly in mind.

I have been engaged on a study of this question for several years. Prior to 1908 I had accepted the ordinary teaching that leprosy was due to an acid-fast bacillus belonging to the fission fungi. I had been getting results which, although considered useless at the moment, were producing an effect on my mind, and about the end of 1908 I became imbued with strong impressions regarding the morphology of the lepra organism. From a survey of my own results, together with a consideration of the work of Rost and Deycke, I became of opinion that leprosy was most probably caused by some species of streptothrix, and that the acid-fast bacillary masses, which were so well known, were merely phases of such a streptothrix, and that, moreover, they represented a resting and resistant stage of the organism. Since the beginning of 1909 I have grown from lepers in Persia and India apparently different organisms, which, in my own opinion, and in that also of others who have seen my work, I have been able to connect up into one organism—namely, the *Streptothrix leproides*. I have grown the following phases of the organism:

(*a*) A non-acid-fast streptothrix in the mycelial stage, and producing acid-fast rods.
(*b*) A non-acid-fast diphtheriod bacillus, producing also acid-fast rods. This is really a streptothrix.
(*c*) An acid-fast bacillus, which is but the broken down stage of a streptothrix, and
(*d*) An acid-fast mycelium.

Animal Experiments.

My animal experiments have been made with the organism in its acid-fast bacillary form. In this form, when injected subcutaneously into guinea-pigs in large doses. I have produced lesions somewhat resembling leprosy, with large numbers of cocco-bacilli appearing in the connective tissue cells. Moreover, Major Rost, with his organism, has produced all the clinical features of tubercular leprosy in a monkey, and in the nodules acid-fast bacilli were found, situated as in leprosy. I made a few experiments with the organism in its non-acid-fast mycelial form, but in view of the results obtained by Kedrowsky, I see that I did not allow anything like sufficient time for these experiments. — *The British Medical Journal.*

A New Cell Proliferant: Its Clinical Application in the Treatment of Ulcers.

[Extract from a preliminary note by Dr. Charles J. Macalister, M.D., F.R.C.P.]

My attention had been directed to the fact that the Symphytum, or common Comfrey, had been much recommended by the ancient writers in medicine as a vulnerary and as a dressing for sores and ulcers of various kinds. From the days of Saxon leechdom* (*c.* 1000) to the end of the seventeenth century there were few authors who did not refer to it, and it was sometimes spoken of as being the "chief vulnerary herbal." I can find no reference to Comfrey in any books on materia medica or therapeutics of relatively recent date; Pereira, for instance, does not refer to it, and it was never an official remedy so far as I can discover. To this day, however, it has a traditional reputation among country folk, both in England and in Ireland, as a domestic herbaceous "simple" for applying to sores, and I was much interested during the past summer, when visiting a farm at Tarvin in Cheshire, to find that its owner always keeps a bed of Comfrey growing in order that he may provide the villagers with it when occasion arises.

Through the kindness of Professor Harvey Gibson I was provided with a large quantity of the root, some of which was handed over to Dr. Titherley and Mr. Coppin, of the Chemical Department of the University of Liverpool, and while they were making a careful chemical analysis of it, which took a considerable time, I proceeded to dress the only ulcer which was then available to me with a strong infusion made from the powdered root. This case was an exceedingly unpromising one, because it was a "rodent" of about two years' duration, not a simple ulcer. After being dressed with the mucilaginous infusion for about a week the surface cleaned, and a distinct growth of epithelium could be seen taking place from some of the marginal points. Later on the upper margin flattened somewhat on its inner aspect, the undermining vanished, and after growing here and breaking down there for a time, the epithelium became stronger and closed in to a considerable extent.

By this time Dr. Titherley reported to me that he had obtained a definite, so far unidentified, crystalline body from the root, and he was able to give me sufficient to experiment with. Since it was very sparingly soluble in water, quite a large amount of solution was made, which was now used as a dressing for the ulcer instead of the infusion. With this application the skinning-over process in the course of a month was all but completed.

*Dr. Edward E. Nicholson (Neuilly) furnished references.

In his preliminary examination Dr. Titherley established the facts that the root contained:—1. Gums. 2. Sugars, including a reducing sugar. 3. Resins. 4. A protocatechuic derivative or derivatives. 5. A substance giving an intense yellow solution with sodium hydrate (not investigated further.) 6. A crystalline solid, very rich in nitrogen and melting at 226C.

Since from clinical observations this latter body appeared to be the physiologically active constituent of the root, Mr. Coppin was asked to devote his attention to its investigation; but Dr. Titherley and he found that the root contained about 0·8 per cent. of it, and by estimating its carbon, hydrogen, and nitrogen contents he showed that it possessed the same empirical formula as allantoin, which it greatly resembled in its chemical properties.

Allantoin.

Some allantoin was now prepared from uric acid, and the product from the root was proved conclusively to be an identical substance by chemical methods. For example, allantoic acid and other derivatives were prepared both from the chemically made allantoin and from that obtained from the root; their melting points were the same, and so forth.

Regarding the chemical physiology of allantoin or the part which it plays in human metabolism very little is known, but some interesting facts have been recorded which may throw light upon its action as a cell proliferant and may point to its having a function to perform in the bodily chemistry, apart from any possibility of its being a product of purin metabolism, in which light it has generally been regarded. It is present both in animals and plants. It was first discovered in the former, and received its name from the fact that it was found in the fetal allantoic fluid. Later on it was identified in the urine of pregnant women. Recently its presence has been demonstrated in very small amounts as a normal constituent of the urines of healthy people, but that it is not an end product of human metabolism, which means that it is probably not derived from the oxidation of uric acid to which it is closely allied, has been shown by a good many observers, as pointed out by Dr. Ackroyd in a paper published in the *Bio-Chemical Journal* for March, 1911. This is an important observation, and is based upon the works of Schittenhelm, Wiener, Minkowski, Poduschka, and Wieschowski, who have shown that when allantoin is given to man it can be recovered to a considerable extent in the urine, and the author himself concludes "that the whole quantity of allantoin excreted by man on a milk and vegetable diet may be derived directly from that contained in the food." It will be noted that I am speaking of the relation of allantoin to human metabolism only. In the dog, cat, and rabbit, on the other hand, it appears to be a normal end product of metabolism.

If these facts are reliable the allantoin in human urine is mainly derived from vegetable foods, as pointed out by Dr. Ackroyd, and in the healthy individual it appears to pass practically unchanged through the economy, the amount eliminated representing about the amount which had been ingested.

Our knowledge of the distribution of Allantoin in the vegetable Kingdom is not very extensive, but it is a very suggestive and interesting fact that such analyses as have been made indicate that it is generally found in parts which are related to growth either active or potential. For instance, in 1881-82 Schultz and J. Barberi found it in the buds of certain plants and in the bark of branches of trees, and Ackroyd refers to its identification in the embryos of wheat separated in the process of milling, and in beet juice by Richards on and Crampton (1886); he has himself demonstrated its presence in bread, French beans, and green peas, whereas it is absent from bananas and rhubarb. Now this is a suggestive circumstance taken in conjunction with the fact that it is a characteristic component of the fetal allantoic secretion, and related therefore to an important structure connected with the fetal circulation, a structure along which the vessels pass which convey the fetal blood to and from its intimate relationship with the maternal blood.

Whenever we find any substances constantly in certain parts of plants or animals it is quite reasonable to suppose that they may be in some way related to and necessary for the particular tissues which have selected them, and although the allantoin in the human embryo might be regarded as a fetal waste product, I think we may feel justified in assuming that, in the economics of Nature, it has a function to perform, perhaps in relation to cell multiplication, especially as it is not at once eliminated through the maternal circulation. The same suggestion is raised by the fact that it is also present in milk, the food of the rapidly growing young organism, and in the parts of some plants in which active cell multiplication takes place.

[Notes are given of successful treatment of several cases by Dr. Macalister and other practitioners].

Dr. Wm. Bramwell, M.A., M.D., B.Ch., Liverpool, writing on the subject, says:—

"I have on more than one occasion cured old ulcers which have resisted other treatment, by the simple extract from the root applied on lint to saturation. After a few hours this dressing, in favourable cases, sets quite hard, and can only be removed by the lengthy application of water, which is often more tedious and painful than the average patient, who has been in the habit of applying some simple dressing, cares to endure. This hard setting acts, in some measure, like strapping, drawing the edges of the ulcer towards one another, but probably much more evenly and accurately than the most skilful strapping could effect. This looks as though the cure is wrought similarly to healing under the scab." —*B. M. J.*

Plucking Live Geese.

It is a vexed question as to whether or not the plucking of live geese constitutes an act of cruelty. Two Irish courts have recently had their say on the point, viz., the Limerick Petty Sessions Court and the King's Bench Division. At Limerick last September a Caherconlish man was summoned by the Society for the Prevention of Cruelty to Animals for alleged cruelty to nineteen geese by plucking them alive. The evidence given by the complainant was to the effect that defendant was a professional plucker, and made his living by plucking geese and selling the feathers, and that he paid the owner 4d. a "pluck" for the right to pluck nineteen geese which were then alive. All the feathers except the wing feathers were plucked, and this, in the complainant's opinion, caused the geese pain, and also left them unprotected against the weather.

For the defence it was contended that the plucking of geese was a common custom in the country, and that no unnecessary pain was inflicted. The magistrates, with one exception, dismissed the case on the merits, believing that the plucking was not cruelty; that it was necessary to prevent vermin, and also that it improved the condition of the birds.

An appeal to the King's Bench came on for hearing the other day, and resulted in the court deciding to make "no rule," on the ground that there was not sufficient evidence before them.

DISEASES OF ANIMALS ACTS 1894 TO 1911, SUMMARY OF RETURNS.

Period.	Anthrax. Outbreaks: Confirm'd	Anthrax. Outbreaks: Reported	Anthrax. Animals: Confirm'd	Anthrax. Animals: Reported	Foot-and-Mouth Disease. Outbreaks	Foot-and-Mouth Disease. Animals.	Glanders * (including Farcy) Outbreaks	Glanders * (including Farcy) Animals.	Parasitic Mange. Outbreaks	Parasitic Mange. Animals.	Sheep Scab. Outbreaks	Swine Fever. Outbreaks.	Swine Fever. Slaughtered. *
GT. BRITAIN. Week ended Jan. 27	26		26				1	5	143	363	13	62	780
Corresponding week in 1911	28		36				5	13			28	32	285
Corresponding week in 1910		29		31			6	35			23	13	94
Corresponding week in 1909		37		42			8	12			35	45	266
Total for 4 weeks, 1912	92		101				13	33	622	1755	63	229	2540
Corresponding period in 1911	85		96				18	63			123	141	1523
Corresponding period in 1910		124		152			25	82			138	82	491
Corresponding period in 1909		115		150			31	71			139	132	845

* Counties affected, animals attacked: Hertford 2, London 2, Middlesex 1.

Board of Agriculture and Fisheries, Jan. 30, 1912.

	Outbreaks									
IRELAND. Week ended Jan. 27	...	...	...	...	...	...	4	24	4	11
Corresponding Week in 1911 ...	...	...	...	...	...	...	1	27	5	48
Corresponding Week in 1910 ...	...	...	...	...	...	...	3	20	1	24
Corresponding Week in 1909 ...	...	...	...	...	...	...	4	19	...	...
Total for 4 weeks, 1911 ...	...	...	...	...	...	...	8	86	11	146
Corresponding period in 1911 ...	1	1	...	...	..	...	8	96	17	281
Corresponding period in 1910 ...	2	2	...	...	...	...	12	100	2	83
Corresponding period in 1909 ...	1	1	...	...	...	...	9	72	3	12

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Jan. 29, 1912

NOTE.—The figures for the Current Year are approximate only.

* As Diseased or Exposed to Infection

Cruelty to a Horse at Llanfair.

A young agricultural labourer, named John Ellis Williams, employed at Garthgynan Farm, Llanfair, was charged with an act of horrible cruelty to a horse. The case came before Dr. J. Medwyn Hughes, and the Mayor (Mr. T. J. Roberts), and aroused considerable interest. The defendant was taken into custody under a warrant.

Inspector Francis Graham, of the N.S.P.C., prosecuted. In consequence of information received he visited Garthgynan Farm, where a statement was made to him by the tenant, Mrs. J. Morris. A dead horse lay in the stable—a bay gelding between three and four years of age, a valuable animal, in a good condition. It lay on its near side, and witness could see four punctured wounds on its body, which, in his opinion, could be caused by a manure gaff, such as the one now produced. Subsequently he saw the accused, and charged him with cruelly beating the horse with a manure hook. He replied "I did do so. I was vexed with the horse, and lost my temper." Witness asked him "had you any drink, or were you drunk," and he replied, "I had a glass or two, and I am sorry I illtreated the horse." A thick leather strap which the horse had worn on the back had been penetrated through, and there were smaller holes in the saddle, showing that considerable violence had been used.

Mr. J. H. Wynne, veterinary surgeon, Denbigh, said he examined the horse on the 16th inst., and found it in a distressed condition, and showing all the symptoms of septic poisoning. There was a considerable swelling on the near side from the centre of the back right on to the hind quarters. Over this swollen area there were a number of punctured wounds—23 in all—some very deep, some less so, and others only just having gone through the skin. One of the wounds had been plugged, and on the removal of the plug, a quantity of gas escaped, followed by a frothy fœtid discharge. He told Mr. D. Morris that the horse could not possibly live. Later, P.C. Henry Jones examined the horse. Witness did what he could for the animal and left. The horse died the same evening.

Replying to the Chairman, witness said the horse died from septic poisoning following the wounds, some of which were more than a finger deep. He had measured the distances between some of the wounds, and these corresponded exactly with the distance between the teeth of the manure gaff now produced.

Prisoner had nothing to say when questioned by the Bench.

The Clerk then read a letter from Mr. John Morris, stating that the defendant had been in his employ for three years, looking after the horses as head man. No trouble had been experienced with him up to this incident.

The Chairman said that the Bench considered the case a very serious one. They had given full weight to the employer's letter, and upon that had decided not to send the defendant to prison, otherwise they would have had no hesitation in doing so. It was a cruel, cowardly, and inhuman act—the act really of a madman. Defendant ought to be thoroughly ashamed of himself. He would be fined £3 and costs, and consider himself lucky at that.

The leniency of the verdict caused great surprise in court.—*North Wales Times.*

A Question of Warranty: Sidebone.

At the monthly sitting of the Dover County Court at the Town Hall, on Wednesday, Jan. 24th, before His Honour Judge Shortt, Frederick R. Marx, baker and confectioner, of Dover, *v.* Marsh, horse dealer, of Deal.

This was an action for damages for an alleged breach of a verbal warranty in regard to the sale of a horse, or alternatively for alleged fraudulent misrepresentation. Mr. Ernest Chitty appeared for the plaintiff, and Mr. Leslie Watts defended.

Plaintiff said he was a baker and confectioner in business at 140 Buckland Avenue. On Tuesday, Nov. 21, defendant came and offered to sell him a brown cob mare that he had brought with him. Witness rode behind the horse with the defendant to the top of Crabble Hill, and although he did not know much about horses it appeared to be a very decent animal. When they returned he told the defendant he wanted the horse to take bread round in a van, which he showed him Defendant, in the presence of witness' man, said "This is just the horse you want. It is perfectly sound and quite fit for your work." He also said it had been working in a mineral water van all the summer. He paid the defendant £7 in hard cash, and he gave him his pony, value £5. He would not have bought the horse if the defendant had not made the statements he did about the horse. The next day the horse was very lame, and on the following day it was worse still, and could scarcely get along. On Friday it was left in the stable, and on Saturday he called in a veterinary surgeon. In consequence of what he said, witness went on Sunday to see the defendant about the horse. Defendant offered to send down another horse, and this he did on Sunday evening, but it proved useless. He wired to the defendant, asking him to take both horses back. This defendant did not do, and on the 28th November witness sent the animals back to Deal by a Mr. Hudson. Defendant refused to take the the first horse in, and he said to witness, who was also present, "You've been had, and now you're crying about it. I've often been had." Witness told him he had warranted the horse to be sound, and defendant replied that he had given no written warranty. On the Wednesday witness had the horse inspected by Inspector Freeman, of the R.S.P.C.A., with the result that arrangements were made for the disposal of the animal to the knackers, who offered 13s. for it. At present the horse was in a meadow till the knackers were ready. From 13s. would have to be deducted the 4s. for the man Hudson for taking the horse to Deal.

Cross-examined: He admitted £12 was not a big price for a horse, and he did not expect to get a first-class animal. The defendant gave his warranty of his own free will. Although the amount of the purchase money was small it did not surprise him that the seller should have said the horse was perfectly sound. He was confident that the defendant gave this verbal warranty. He denied the defendant said he had had the horse only three days, and that it was a little shaky on the fore feet. He did not work it hard on the rounds; the journey was only about three miles.

Frank Brown, in the employ of the plaintiff, said he saw the defendant and the horse on 21st November, and he was present at the bargaining. The defendant said the horse was sound and fit for the work, and also that it would improve by working. The price was afterwards fixed at £12. On Wednesday he accompanied Mr. Marx with the horse on the rounds, and it appeared very stiff. Defendant said nothing about the horse being "shaky" on its fore feet. They went to Liverpool Street from the shop out as far as the "Orange Tree," Maxton, and back again. The next day the horse was worse still, and on Saturday it was seen by Mr. Clyde, the veterinary surgeon. On the Sunday evening the defendant sent another horse, but when this was tried on Monday it was found to be quite useless.

Cross-examined: Defendant said the first horse would improve because baker's work was lighter than it had been previously doing.

Mr. Watts: But how could it improve if it were perfectly sound?—It could by rest.

Did you not understand there was something the matter with the horse if Mr. Marsh said it would improve?—Not at all.

George Hudson, of 37 George Street, said he was engaged by Mr. Marx on November 28th to take two horses to the defendant at Deal. On the way he found he was stopped by the County Police, who called his attention to condition of the brown cob.

Mr. Watts objected to this evidence.

Witness, continuing, said Mr. Marx went by train and accompanied him on arriving at Deal to Mr. Marsh. Mr. Marx told him the cob was no good and that he must take it back. Defendant's boy ran the horse up and down and it went very lame, but defendant said he could not see it. Defendant said to Mr. Marx, "You've been 'had.' I've often been 'had.'" When Mr. Marx said he had warranted the horse, defendant said "Where's your warranty."

Cross-examined: He did not think it unlikely that after defendant said he could not see that the horse was lame, he would say "You've been 'had.'"

His Honour: How I wish the law would insist on a written warranty! (Laughter.)

Mr. Chitty: It would reduce litigation, your Honour.

Mr. Clyde, veterinary surgeon, of Dover, stated that he examined the brown cob and found it to be suffering from ossification of the feet, which were contracted. It was useless for a trotting job, for which Mr. Marx required it. If it were given a good rest and then smartly whipped up it would give a good account of itself for the time being. If it were shod in a certain manner the lameness could be alleviated to a certain extent. At the time he saw it on the Saturday it was quite incapable of going to work.

Cross-examined: The horse had sidebones, and if Mr. Richardson (another veterinary surgeon) said there were none, he should still say there were. It could be made workably sound by being shod in a particular manner.

His Honour: Would it be fit for Mr. Marx's work?—No, for walking only.

By Mr. Watts: A perfectly sound horse was not sold for £12.

By Mr. Chitty: He had seen plenty of horses at that price which would have been fit for the plaintiff's work.

Inspector J. Freeman, R.S.P.C.A., said he examined the cob at Deal with Mr. Marx on 29th November. She was lame on both fore feet, and suffering from ringbone and sidebone. The animal was incurably lame, and he advised it to be destroyed. It was fit for no work.

Cross-examined: He had had forty-five years' experience and had passed three severe examinations. He would not say any veterinary surgeon was wrong; everyone was entitled to his own opinion.

This concluded plaintiff's case.

Defendant, giving evidence, denied saying anything about the horse being sound. Plaintiff said "Is it all right, Marsh," and witness said "All its faults you can see for yourself. It is a bit shaky on the fore feet, but that will very likely improve with your work." He told plaintiff he had had the animal only a few days. He denied giving a verbal warranty, and nothing was said about one. He had never heard of a perfectly sound £12 horse. When Mr. Marx came to see him, witness made no remark about his having been "had."

Cross-examined: He had had the horse only three days when he sold it, and he did not know much about it. He did not consider the lending of the second horse to the plaintiff amounted to an admission, because Mr.

Marx came to him on the Sunday and said he must have a horse for the morning as both his horses were lame.

John Hamilton, of Deal, who said he was with the defendant at the time of the sale of the horse, gave corroborative evidence.

Cross-examined: Marsh told the plaintiff the horse would do for his work, and that it had been all right during the time he had had it.

Mr. Richardson, veterinary surgeon, said he examined the horse on Wednesday, November 29th. It was lame on the off fore leg, and both fore tendons were contracted. He saw no evidence of sidebone or ringbone, and what he could not understand was that neither Mr. Clyde nor Mr. Freeman noticed that the horse had been shod in leathers. It was over at the knees, and the heels were contracted.

Cross-examined: There was no such thing as ossification of the fore or hind feet; he had never heard the term in that connection before.

His Honour said that if the line of defence was that no warranty was given the evidence of this witness was not material.

Mr. Watts submitted that if His Honour decided a warranty was given, this evidence would be material.

Mr. Richardson, in reply to further questions, said the horse could have been made workably sound by proper treatment.

Arthur Bushell, employed by the defendant, denied the words "You've been 'had' were used by the defendant.

Cross-examined: He did not hear what was going on when he was trotting the horse up and down.

Mr. Watts submitted that defendant's story was borne out by the probabilities of the case.

Mr. Chitty contended that the defence as to the question of a warranty was overwhelming. He submitted that the evidence for the prosecution was contradictory, and that the fact of the defendant lending another horse as a substitute amounted to an admission.

His Honour, in giving judgment, said in all cases of this kind it was much more satisfactory to have a written warranty. He considered the plaintiff had failed to prove beyond reasonable doubt that the defendant did give a warranty. Weighing one side with the other he felt there was a slight preponderance on the plaintiff's side, but it was not enough. He held that reasonable doubt did exist in this case, and he would give judgment for the defendant.—*The Dover Express.*

What of the Horse?

To the Editor of The Nottingham Guardian.

Sir,—The complaints of injustice to owners and users of horses are isolated ones only as far as publicity is concerned. The horse in the past has always proved its supremacy in utility, combined with cost and upkeep, as a user of the King's highway. It has, however, to meet rivals and competitors, and undoubtedly the foremost is the motor vehicle. The point I wish to mark is that of fair competition. We have seen, and do see now, the growth of the motor vehicle, fed with alterations in laws, concessions in regard to the streets and highways and in other ways, all of which are perfectly in order so far as these new arrangements do not trespass on the rights of other users of the roads. There is not the slightest doubt but what they do, and whereas motor vehicles have organisation behind them to assert their requirements and attain their desires, the horse has not. There is nothing surprising in this. Had not the motor vehicle organisation behind it from the first it would have progressed less, very much less, and the horse owner and user would not have had his rights imperilled, and as organisation to-day is necessary to successfully meet organisation, the only logical conclusion possible is that for their rights, for their liberties, and for their security, horse owners and horse users, and in a word, all interested in the horse must organise, must combine, must co-operate. It is with these facts considered that I have formed an opinion on the question. If it is true, as I am told, there are societies and organisations in existence for the purpose I have mentioned, it would seem they exist in name only. What is wanted is a society which will embrace every horse owner, user, and well-wisher, that can have authority and power, representing as it would by far the greatest users of the roads.

To attempt to stay or retard true progress would be as futile as it would be wrong, and any efforts which I, with the help of others, may and are making are not antagonistic to the real progress of efficient means of transport. We live in a day of speed, but speed at any price is not progress. In the reports of the companies controlling motor propelled vehicles in the large centres of the world we see a tremendous amount of capital returning nothing to its owners, except greater speed in transportation to them and the community generally. And this at the expense in road alteration and numerous other ways which encroach upon the rights of, and put difficulties in the way of means of transport which gives a return on capital. There can be no sentiment in the horse; he pays and has done since he was created. Therefore to put difficulties in his way, to endeavour to assist his substitute is not only unfair but dangerous. —I am, sir, etc., G. H. KEEBLE.

Johne's Disease—Departmental Committee to be asked for.

At the meeting of the Council of the Central and Associated Chambers of Agriculture on Tuesday, January 30th, at the Surveyors' Institution, Westminster, Sir Luke White, M.P., presiding:—

Prof. PENBERTHY moved the adoption of the report of the Cattle Diseases Committee, which recommended that a deputation from the committee should wait upon the Board of Agriculture to ask for the appointment of a Departmental Committee to inquire into the nature of Johne's disease. He said that this disease was recognised under various local names, and it was to be feared that it was greatly on the increase. It was an affection of the lining membrane of the intestines, caused by a micro-organism, and its symptoms were diarrhœa and wasting. The cattle affected contaminated the pastures. So far science had discovered no cure for it, or any real practical measure for its prevention. As a rule the disease was fatal to the animal attacked. Sometimes it affected only one animal on a farm, and at other times a farmer might lose as many as twenty or thirty cattle.

Mr. T. LATHAM, who seconded, said that sheep were liable to the disease as well as cattle.

The report was adopted.—*The Times.*

"When Doctors Differ."

Mr. Plowden, the Marylebone magistrate, commenting on the divergence of opinion between two veterinary surgeons, said that most people, whether they had had any training or not, could tell if a horse was lame, and an ordinary man in the street could do it generally with success, but there were two skilled persons, one of whom said the horse was very lame, while the other said it was not. After his long experiences of the differences of veterinary surgeons he was quite expecting that one day one veterinary surgeon would come and say, "This is a horse," and another would say, "It isn't. (Laughter). That was about the only thing left in which they could not differ.—*Evening Express*, Liverpool.

Workmens' Compensation—A Referred Case.

At Tiverton County Court on Saturday a somewhat unusual case came before Judge Beresford, an agreement under the Workmen's Compensation Act having been referred to his Honour by the Registrar, who did not consider the compensation agreed to therein adequate, although the parties and their solicitors concurred. The agreement was made between John Blackmore, a Talaton labourer, (father of Jonas Blackmore), and Mr. S. H. Down, a Bampton veterinary surgeon.

Mr. Tweed, solicitor for Blackmore, stated that after a long correspondence with the insurance company his client agreed to accept £10 rather than have the expense and trouble of litigation.

His Honour thought he had no power to order a bigger sum.

Mr. Clutsom, for Mr. Down, said Blackmore was incapacitated for seven weeks, but during that time was paid full wages. He, however, claimed a lump sum from his employer for disfigurement, having lost one ear. The company offered £10 and £2 2s. costs, and this was accepted and embodied in an agreement.

Judge Beresford: £10 seems a very small sum as compensation for the loss of an ear, and I would suggest that the Insurance Company increase the sum to £20.

Mr. Clutsom said the judge's representation should be placed before the company, and if they agreed, the case would have to be brought before the Registrar.

The Control of the Milk Supply.

At a meeting in December in Cupar, the Fife Local Authority had under consideration the scheme of the Association of Veterinary Officers of Health with reference to tuberculosis, the object of which is to put the control of the milk supply into the hands of a central authority, preferably the Board of Agriculture. Mr. E. E. Morrison, Bonnytown, moved that the Committee give their general approval to the scheme of the Veterinary Officers. They should employ veterinary surgeons, he said, more than they did at present. They had men coming into their byres and inspecting their premises who knew little about cows, and it would be much better if they had veterinary surgeons. Mr. Morrison's motion was adopted.—*N.B.A.*

Goat-Keeping in Ireland.

A conference took place at the Castle, Dublin, in December, organised by the Department of Agriculture, and presided over by Her Excellency the Countess of Aberdeen, to consider the Department's scheme for the improvement of goats in Ireland, and to facilitate their being kept by small-holders.

It was decided at the Conference to establish an Irish Goat Society to work in connection with the British Goat Society in England, and to form local associations, under the direction of the head society, to encourage goat-rearing and create a supply of milk amongst cottagers who rarely have an opportunity of tasting it.—*Live Stock Journal.*

Patent Medicines and the Press.

The scandalous way in which the entire British Press—with two or three honourable exceptions—boycotted the British Medical Association.s publication "Secret Remedies" in 1909 is a standing record of the complete power of the nostrum vendors and their advertisements and of the ignoble cowardice of newspaper proprietors. The special "quackery" number of *The British Medical Journal* some six months ago met with a similar fate.

There is need for many more torchbearers before truth can be properly revealed to the multitude. Of those who have kept the flame alight hitherto, honourable mention is especially due to Dr. Henry Sewill, whose addresses and contributions to *Vanity Fair* have long been means of enlightenment both to the public and the medical profession. Dr. Sewill has long agitated for a Royal Commission as the best way to unsettle the conspiracy of silence of the Press as a whole.—*The Hospital.*

The Uses of Izal.

Messrs. Newton, Chambers & Co., Ltd. (Thornclife, Sheffield) will gladly send their series of handbooks on disinfection to readers of this journal on receipt of a postcard. *Medical Izal* contains reprints from the principal medical journals, of papers dealing with the use of Izal in the treatment of phthisis, puerperal sepsis, tropical dysentery, enteric fever, cholera, and tinea favosa capitis. *Practical disinfection* deals with the domestic uses of Izal. *The Veterinary Handbook* is full of useful information for owners of horses, dogs, cats, poultry, etc. The last of the series, *Izal in the Dairy*, apart from its purpose as an advertisement is a really useful handbook at a time when the conditions of milk production are claiming so much attention.

ARMY VETERINARY SERVICE.

Extract from *London Gazette.*

War Office, Whitehall, Jan. 26.

Regular Forces. Army Veterinary Corps.

Brevet.-Maj. A. G. Todd, A.V.C., to be Dep. Assistant Director-General, *vice* Capt. H. E. Gibbs, who has resigned that appointment. Dated Jan. 17.

Capt. H. M. L. Conyngham to be Major. Dated Jan. 6.

Territorial Force. Army Veterinary Corps.

Lieut. J. L. C. Jones to be Captain. Dated Aug. 18, 1911.

The undermentioned officers arrived from India in Transport "Dongola" on Jan. 17th, and have been posted for duty:

Major E. E. Martin to Woolwich; Major A. C. Todd to War Office to take up appointment of Deputy Assistant Director-General, A.V.S.

Captains J. S. Nimmo to Aldershot; W. H. Simpson to Leeds.

The following officers embarked for India in Transport "Dongola" on Jan. 27:

Captains F. S. Probyn and A. Leaning.

His Excellency the Earl of Aberdeen, K.T., G.C.M.G., G.C.V.O., Lord Lieutenant, held his first Levée of the season at Dublin on Tuesday. In the list of those present are:

Prof. Mettam, President Royal College of Veterinary Surgeons, presented by Sir Christopher Nixon, Bart.

Lieut.-Col. J. Moore, F.R.C.V.S., presented by the Commander of the Forces.

No fewer than forty-two candidates applied for the post of Medical Officer of Health for the county borough of Wigan.

CORRESPONDENCE.

OUR CONVENIENTLY SHORT MEMORIES.

Sir,

The perusal of the report of last Council meeting as it appears in *The Veterinary Record* cannot fail to strike most of us as a remarkable illustration of the shortness of the human memory.

The report states that Mr. Barrett suggested that for the sake of modifying opposition it might be judicious to restrict the annual fee to half-a-guinea. This apparently innocent and pertinent remark raised quite a storm, one member said—"The question of the annual fee as proposed in the Bill was thoroughly discussed . . . . . and it was *practically unanimously* settled that it should be one guinea. I think there were only about three dissentients." Another —"Is it open to a member of this Council . . . . to suggest that the Council should go back upon its *practically unanimous* decision that the Bill should stand as it is?" Practically unanimous—how does this accord with the facts?

The report of a Council meeting which appeared in *The Record* of 10th April, 1909, showed that on an amendment proposed by Mr. Dollar, that for the words "a fee of one guinea" the words "such fee not less than 10/6 nor exceeding one guinea as the Council shall from time to time direct," should be substituted, a lengthy wrangle took place, after which vote was taken and was thus reported: "The amendment moved by Mr. Dollar, seconded by Prof. Williams was then put, and the President declared it lost, stating that nine voted for and ten against. An appeal was then made to him that the vote should be taken again, as another count made the voting equal. The vote was then taken again, and resulted in a tie, ten voting for and ten against. The President: Without hesitation I give my casting vote against the amendment."

Practically unanimous!—Yours, etc.,

J. R. U. Dewar.

Edinburgh, Jan. 25.

"WHISTLING."

Sir,

The case described by Mr. Spreull is a very interesting one. Instances of this nature explain some, at least, of the marked differences of opinion that occur with reference to the soundness of a horse's wind. At the same time if the animal in question was examined in the ordinary manner he would probably have been condemned as a "whistler." In examining horses we seldom expend the amount of time mentioned by Mr. Spreull in this case; probably had the horse been subjected to a severe test at the first examination, it would have been found that the abnormal sound would have disappeared. We frequently find that well-bred hunters when very fresh may whistle in an intermittent manner when cantered in a circle, but when permitted to extend themselves no abnormal sound can be detected.

But there is an important matter to consider in connection with such cases, although one veterinary surgeon may be of opinion that a horse showing the above peculiarity in respiration is sound, another may hold the contrary opinion. Again the purchaser must be informed that the horse whistles in the manner mentioned. If the animal is sold shortly after purchase, it is quite possible that on being subjected to examination, he may be rejected as a whistler. It is a common experience that such animals do become whistlers in a variable period, while *per contra*, others may continue sound for life.

At the same time, a horse that showed the peculiarity of respiration described by Mr. Spreull might be a risky purchase for a man who intended to sell him at a profit.

Even for stud purposes there would be considerable risk, as if the horse was entered for a show few veterinary surgeons would be found who would devote the time required to find out the idiosyncrasies of the animal. Moreover, it is seldom possible, or even desirable, to subject a stud horse to so severe a test as that described by Mr. Spreull, and few owners would permit a stallion to be galloped "to a standstill." The probability is that the animal would be tested in the ordinary manner and rejected, although after-events might prove that he was sound.

The subject of whistling is in reality a most important one, although it is treated of very lightly in text books. As compared with roaring there are some points worthy of consideration. Except in intermittent cases, there is no difficulty in detecting roaring, all that is required is the faculty of hearing: and the abnormal sound can be heard by the layman as well as by the professional.

But with whistling it is a different matter: here great discrimination is necessary not only in detecting the sound in slight cases, but also in differentiating it from certain peculiarities of respiration which may be perfectly normal.

Again, whistling in many cases requires a severe test before the abnormal sound is manifested, while in the case of roaring but little exertion is necessary. Pages might be written on the peculiarities displayed by whistlers; some horses whistle only while ridden in a circle, others when galloped in a straight line; some whistle most distinctly at the commencement of their work, others after being subjected to severe exertion only, while others again only display the abnormal sound after being pulled up.

Again, there are sounds which cannot be described as either whistling or roaring, and these often give rise to considerable differences of opinion as to whether they should be regarded as causes of unsoundness.

Some practitioners indeed claim to possess such remarkable powers of diagnosis that they pretend to differentiate these sounds from those known to be abnormal, and even venture to locate the origin of such.

In conclusion, I venture to put the following queries in the hope of gaining information.

(*a*) What is "thick wind?" The term is often used, but it would be interesting to know what condition it really refers to, and how it is to be differentiated from the harsh blowing of horses that are out of condition.

(*b*) What is the necessity for performing the new operation for roaring on stud horses and mares intended for breeding purposes, that are roarers?

A question was recently asked on this subject as to whether such animals if cured (?) should be considered as sound. As these animals are not worked or subjected to exertion, why operate on them at all, unless, of course, it is considered proper to render them apparently more valuable in the sale ring.

Why is roaring objected to in animals for stud purposes? Surely it is because the disease is regarded as hereditary. Does the operation do away with the hereditary tendency of the disease? If it is a nervous affection (and there is much evidence to support this view), then I fail to see how stripping the ventricles can have any effect on the nervous lesions on which the disease depends.

It would be as rational to hold that because an animal suffering from navicular disease goes sound after neurectomy has been performed, that such animal should be regarded as sound for stud purposes.

From an ethical point of view, both operations should be condemned in the case of stud animals, but more especially that for roaring, as it effectually conceals the existence of the disease from the veterinary examiner.

As to the propriety of operating on roarers the property of dealers, whose object is to sell the animals as sound, it is quite possible that opinions will differ. If those unfortunate sequels to the operation which have lately been discovered become more frequent, and operators get more numerous, then it is likely that in future when examining horses we shall ask for a special guarantee from the sellers that the operation has not been performed.

Of course some practitioners may not regard the matter in the above light, being comforted by the thought—

"For the jingle of the guinea
Helps the hurt that honour feels."

—Yours, etc.,

E. Wallis Hoare.

January 29th.